

# RANSOME

## MANUFACTURING

*Engineering and Equipment Manufacturing*

## RE Series Electric LP-Gas Vaporizers



### Standard Features

- Ransome's unique liquid level float switch configuration. The high liquid level switch prevents liquid from entering the outlet.
- Precision operating and high temperature switches. The electronic operating temperature controller operates the heater circuit(s) for the desired outlet vapor temperature set point. The high temperature switches turn the vaporizer off in case of runaway heater malfunction.
- The solenoid valve, in conjunction with the high liquid level switch, closes the inlet preventing the liquid from spilling over to the outlet.
- Electric resistance cartridge heaters. Located inside the heat exchange tubes or cylinders. They never come in direct contact with LP-Gas. Rather, they provide the heat required for vaporization through the walls of the heat exchange tubes.
- ASME stamped relief valve. Each vaporizer unit is adequately protected in accordance with NFPA 58 and California Title 8 codes.
- 480V AC , 3PH, 60 Hz Input power. No other power is required. (380V AC, 3PH, 50Hz China ONLY)
- All sizes are capable of infinite turndown and will maintain a ready supply of vapor from zero load to full capacity. At no load, only enough heat will be generated to maintain set point temperature.
- Standard electrical configuration Class I, Division II. (Class I, Division I, also available.)

Models are available in a complete range of sizes from 25 GPH to 400 GPH propane capacity, allowing you to buy precisely the vaporization you need.

Standard models are built to conform with requirements of National Fire Protection Association pamphlet 58, American Society

of Mechanical Engineers Section VIII and California Code of Regulations Title 8. All models are Underwriters Laboratories.



## Selection Chart

If your maximum propane load requirements are up to *				Height		Width		Depth		Shipping Weight		RANSOME MODEL
GAL/HR	MILLIONS OF BTU/HR	CF/HR	KG/HR	IN.	CM.	IN.	CM.	IN.	CM.	LB.	KG.	
25	2.28	912	48	22	56	10.5	27	10.5	27	90	41	<b>RE25</b>
50	4.58	1,825	96	35.5	90	10.5	27	10.5	27	125	57	<b>RE50</b>
80	7.32	2,920	153	51.5	131	10.5	27	10.5	27	165	75	<b>RE80</b>
160	14.64	5,840	307	51.5	131	20.5	52	10.5	27	325	147	<b>RE160</b>
240	21.96	8,760	460	51.5	131	30.5	77	10.5	27	485	220	<b>RE240</b>
320	29.28	11,680	614	51.5	131	40.5	103	10.5	27	645	293	<b>RE320</b>
400	36.60	14,600	768	51.5	131	50.5	128	10.5	27	820	372	<b>RE400</b>

\* Rated capacity in GPH of propane @ 0 degrees F with a minimum vapor outlet temperature of 100 degrees F.  
NOTE: Rated capacity for butane will be lower than that of propane.

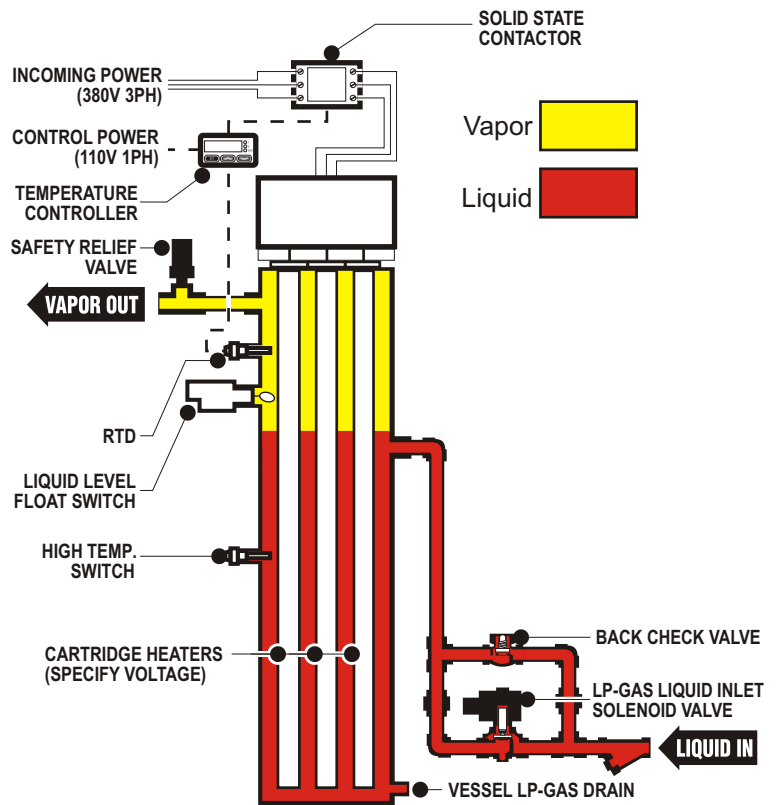
## Theory of Operation

RE Series Electric Vaporizers are microprocessor controlled vaporizers capable of providing precise heat control for the vaporization of LP-Gas. Units are available in capacities ranging from 25 to 400 GPH. Standard units are completely self-contained requiring connection of LP-Gas inlet/outlet and heater circuit electrical power. All are factory tested on propane and shipped ready for use.

RE Series Electric Vaporizers have two high temperature protection devices to protect the system in the event of an over-temperature condition. A separate precision Snapdisk type high temperature switch is installed in the potentially hottest part of the heat exchange vessel. Incorporated within the electronic temperature controller is another high temperature monitor to provide protection against high temperatures. In addition, the electronic temperature controller protects against a low temperature condition in the event of over capacity or heater failure and the resultant loss of heat. In any of the above cases, a safety shutdown will occur requiring a manual restart once the problem has been resolved.

The Vapor Outlet Line pressure is monitored by the Safety Relief Valve which opens when the line pressure exceeds 250 psig.

ASME Code Heat exchange pressure vessels with internal heat exchange cylinders. Each vessel is constructed of carbon steel material for its high strength, thermal conductivity characteristics and high resistance to thermal damage (melting down). Because it is made of high strength carbon steel, it is virtually impossible to damage the vessel even under the most extreme condition: a runaway heater in a dry vessel.



Vessel Shell : SA106 Grade B Carbon Steel.  
Heat Exchange Cylinders : SA214 Carbon Steel.  
Connections: SA105 Carbon Steel.

## Warranty

Ransome Manufacturing, 3495 South Maple Avenue, Fresno, California, warrants to all parties all equipment manufactured and sold by it to be free from defects in material or workmanship under normal use and service, when installed and used in accordance with all applicable state and local codes, regulations and laws in accordance with National Fire Protection Pamphlet 58. Ransome Manufacturing agrees to repair or replace any equipment which its examination reveals to have been defective due to faulty workmanship or material, if returned to factory, transportation charges prepaid. Deviations from recommended applications, system design, installation and service practices, as well as deterioration or wear due to foreign materials or contamination present in LP-Gas or air shall be considered as abuses and render this warranty void. This warranty applies for a period of one year from date of installation, but not more than eighteen months after shipment from factory.

This warranty is expressly in lieu of all other warranties expressed or implied, and of all obligations or liabilities on its part for damages including but not limited to consequential damages, following the use or misuse of equipment sold by it. No agent is authorized to assume any liability for Ransome Manufacturing, except as set forth above.

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